

FORWARD AND RETURN DIRECTION PAYLOAD  
ARCHITECTURE USING EQUIVALENT AND SHARED  
COMPONENTS AND SUBASSEMBLIES

ABSTRACT OF THE DISCLOSURE

A communications satellite system 100 is provided that comprises a communications satellite 101, at least one user terminal 204 and at least one gateway terminal 202. The communications satellite 101 conveys communication signals between the user terminal 204 and the gateway terminal 202. The communications satellite system 100 includes a forward communication path 200 and a return communication path 300 through the communications satellite 101 between the user terminal 204 and the gateway terminal 202. At least one equivalent signal component is located in both the forward communication path 200 and return communication path 300 and operates on the communication signals. The equivalent signal component has substantially the same operating range in both the forward communication path 200 and return communication path 300 for at least one operating characteristic.